**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A rotation-to-linear motion transforming apparatus comprising:

an eccentric cam coupled to a torque input shaft, said eccentric cam being rotated through 360° eccentrically with respect to the torque input shaft;

a cam ring, an inner wall of which is placed in contact with said eccentric cam and urged by said eccentric cam to rotate, said cam ring having formed on an outer periphery thereof opposed flat surfaces and opposed first and second side surfaces extending between the opposed flat surfaces;

a first and a second plunger placed to be movable linearly cyclically in a first and a second direction which are opposed to each other and perpendicular to an axis of eccentric rotation of said eccentric cam, each of said first and second plungers having a flat surface which is pressed against said cam ring in slidable abutment with one of the opposed flat surfaces of said cam ring so as to hold said cam ring from rotating to cause said cam ring to be moved by press arising from the eccentric rotation of said eccentric cam from 0° to 180° to complete a linear stroke of the first plunger in the first direction against pressure exerted by the flat surface of the first plunger on the flat surface of said cam ring and from 180° to 360° to complete a linear stroke of the second plunger in the second direction against pressure exerted by the flat surface of the second plunger on the flat surface of said cam ring, wherein 0° and 360° coincide with a bottom dead point of said first plunger and 180° coincides with a top dead point of said first plunger;

a first groove formed in a portion of the first side surface of said cam ring, the first side surface being on a side of said cam ring which is subjected to torque, as produced by the eccentric rotation of said eccentric cam from 0° to 180°; and

a second groove formed in a portion of the second side surface of said cam ring, the second side surface being on a side of said cam ring which is subjected to torque, as produced by the eccentric rotation of said eccentric cam from 180° to 360°,

wherein said first groove being closer to the second plunger than the first plunger in the first side surface of said cam ring, and said second groove being closer to the first plunger than the second plunger in the second side surface of said cam ring, and

wherein said first and second grooves respectively extend over entire widths of the first and second side surface of said cam ring, respectively.

2. (Previously Presented) A rotation-to-linear motion transforming apparatus as set forth in claim 1, wherein said grooves are provided in a portion of said cam ring which is out of abutment with said plungers and to which a tensile stress is added when resistance to sliding motion of said cam ring relative to said plungers increases.

Claim 3. (Canceled).

4. (Currently Amended) A fuel injection pump for an engine comprising:

a housing having formed therein a cam chamber into which fuel is supplied;

an eccentric cam disposed within the cam chamber of said housing in mechanical connection with a torque input shaft into which torque outputted by an engine is inputted, said eccentric cam being rotated through 360° eccentrically with respect to the torque input shaft;

a cam ring, an inner wall of which is placed in contact with said eccentric cam and urged by said eccentric cam to rotate, said cam ring having formed on an outer periphery thereof opposed flat surfaces and opposed first and second side surfaces extending between the opposed flat surfaces;

a first and a second plunger placed to be movable linearly cyclically in a first and a second direction which are opposed to each other and perpendicular to an axis of

eccentric rotation of said eccentric cam, each of said first and second plungers having a flat surface which is pressed against said cam ring in slidable abutment with one of the opposed flat surfaces of said cam ring so as to hold said cam ring from rotating to cause said cam ring to be moved by press arising from the eccentric rotation of said eccentric cam from 0° to 180° to complete a linear stroke of the first plunger in the first direction against pressure exerted by the flat surface of the first plunger on the flat surface of said cam ring and from 180° to 360° to complete a linear stroke of the second plunger in the second direction against pressure exerted by the flat surface of the second plunger on the flat surface of said cam ring, thereby urging said plungers to reciprocate to increase and decrease a volume of respective fuel pressurizing chambers cyclically, wherein 0° and 360° coincide with a bottom dead point of said first plunger and 180° coincides with a top dead point of said first plunger; **[[**and**]]**

a first groove formed in a portion of the first side surface of said cam ring, the first side surface being on a side of said cam ring which is subjected to torque, as produced by the eccentric rotation of said eccentric cam from 0° to 180°; and

a second groove formed in a portion of the second side surface of said cam ring, the second side surface being on a side of said cam ring which is subjected to torque, as produced by the eccentric rotation of said eccentric cam from 180° to 360°,

wherein said first groove being closer to the second plunger than the first plunger in the first side surface of said cam ring, and said second groove being closer to the first plunger than the second plunger in the second side surface of said cam ring, and

wherein said first and second grooves respectively extend over entire widths of the first and second side surface of said cam ring, respectively.

5. (Previously Presented) A rotation-to-linear motion transforming apparatus as set forth in claim 4, wherein said grooves are provided in a portion of said cam ring which is out of abutment with said plungers and to which a tensile stress is added when resistance to sliding motion of said cam ring relative to said plungers increases.

Claims 6 and 7. (Canceled).

8. (Currently Amended) A rotation-to-linear motion transforming apparatus as set forth in ~~claim 3~~ claim 1, wherein said groove is V-shaped in cross-section.

9 (Currently Amended) A rotation-to-linear motion transforming apparatus as set forth in ~~claim 3~~ claim 1, wherein said groove does not communicate with the inner periphery of the cam ring.

Claim 10. (Canceled).

11. (Currently Amended) A rotation-to-linear motion transforming apparatus as set forth in ~~claim 6~~ claim 4, wherein said groove is V-shaped in cross-section.

12. (Currently Amended) A rotation-to-linear motion transforming apparatus as set forth in ~~claim 6~~ claim 4, wherein said groove does not communicate with the inner periphery of the cam ring.

13. (Currently Amended) A rotation-to-linear motion transforming apparatus comprising:

an eccentric cam coupled to a torque input shaft, said eccentric cam being rotated through 360° eccentrically with respect to the torque input shaft;

a cam ring, an inner wall of which is placed in contact with said eccentric cam and urged by said eccentric cam to rotate, said cam ring having opposed flat surfaces formed on an outer periphery thereof and opposed first and second side surfaces extending between the opposed flat surfaces;

first and second plungers placed to be movable linearly cyclically in a first and a second direction which are opposed to each other and perpendicular to an axis of

eccentric rotation of said eccentric cam, each of said plungers having a flat surface which is pressed against said cam ring in slidable abutment with one of the flat surfaces of said cam ring so as to hold said cam ring from rotating to cause said cam ring to be moved by press arising from the eccentric rotation of said eccentric cam from 0° to 180° to complete a linear stroke of the first plunger in the first direction against pressure exerted by the flat surface of the first plunger on the flat surface of said cam ring and from 180° to 360° to complete a linear stroke of the second plunger in the second direction against pressure exerted by the flat surface of the second plunger on the flat surface of said cam ring, wherein 0° and 360° coincide with a bottom dead point of said first plunger and 180° coincides with a top dead point of said first plunger; and

a first and a second groove formed in side surfaces of said cam ring which are opposed to each other across said eccentric cam, the first and second grooves tapering in a direction substantially perpendicular to the direction in which said plungers are movable linearly and being offset from each other in the direction in which said plungers are movable linearly, each of the first and second grooves being responsive to application of a physical load greater than a given degree in a direction of rotation of said eccentric cam to undergo breakage, wherein

the first groove is formed in a portion of the first side surface of said cam ring, the first side surface being on a side of said cam ring which is subjected to torque, as produced by the eccentric rotation of said eccentric cam from 0° to 180°; and

the second groove is formed in a portion of the second side surface of said cam ring, the second side surface being on a side of said cam ring which is subjected to torque, as produced by the eccentric rotation of said eccentric cam from 180° to 360°,

said first groove being closer to the second plunger than the first plunger in the first side surface of said cam ring, and said second groove being closer to the first plunger than the second plunger in the second side surface of said cam ring, and

said first and second grooves respectively extend over entire widths of the first and second side surface of said cam ring, respectively.

Claim 14. (Canceled).

15. (Previously Presented) A rotation-to-linear motion transforming apparatus as set forth in claim 13, wherein each of said first and second grooves is in a V-shaped in cross section.

16. (Previously Presented) A rotation-to-linear motion transforming apparatus as set forth in claim 13, wherein said grooves do not communicate with the inner periphery of the cam ring.

17. (Previously Presented) A rotation-to-linear motion transforming apparatus as set forth in claim 13, wherein each of the side surfaces of said cam ring in which said first and second grooves are formed is out of abutment with said plungers and to which a tensile stress is added when resistance to sliding motion of said cam ring relative to said plungers increases.